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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/786,480

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EXAMINER

NGUYEN, KEVIN M

ART UNIT

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2629

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/786,480	Applicant(s) UEHARA ET AL.	
	Examiner KEVIN M. NGUYEN	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,10-13 and 17 is/are pending in the application.
- 4a) Of the above claim(s) 3-9,14-16,18,21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,10-13 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/22/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

Applicant's election without traverse of species I, figure 10 is readable on claims 1, 10-13, 17 and 21 in the reply filed 3/3/2009 is acknowledged.

The examiner believes that claim 21 is not readable on Species I, figure 10, because claim 21, last paragraph recited the limitation "wherein said optical unit is a lenticular lens in which a plurality of cylindrical lenses is arranged in the horizontal direction, said cylindrical lenses being disposed in each line in which said pixel sections extend in the vertical direction corresponding to the longitudinal direction of said cylindrical lens" which is readable on Species III, figure 15.

The limitation "said cylindrical lenses being disposed in each line in which said pixel sections" is not found in the species I, figure 10. Therefore, Species I, figure 10 is readable on claims 1, 1-13 and 17.

Information Disclosure Statement

The information disclosure statement filed 12/22/2009 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates

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that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, “said second pixel being disposed at a position apart from said first pixel in a horizontal direction” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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The drawings are objected to under 37 CFR 1.83(a) because they fail to show (a) “said second pixel being disposed at a position apart from said first pixel in a horizontal direction,” as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Iljima (US 6,909,479).

Regarding to claim 1, AAPA conventionally discloses an image display device comprising: a light source (10, figure 4); a display panel (21, figure 4) disposed in front of said light source (10) and having a plurality of pixel sections in the form of a matrix, each of said pixel sections including a first pixel (43, fig. 4) for displaying an image for a first viewpoint (52, fig. 7) and a second pixel (44) for displaying an image for a second viewpoint (51), said second pixel (44) being disposed at a position apart from said first pixel (43) in a first direction (12, figure 6, paragraph 23); an optical unit (3, fig. 7) disposed in front of said display panel (21) for deflecting light emitted from said first and second pixels (43, 44) (paragraph 14), wherein each of said first and second pixels includes a transmissive region (410, fig. 7) for transmitting the light emitted from said light source to said optical unit and a reflective region (420, figure 7) for reflecting exterior light incident on a front side of said display panel (22) to said optical unit (3) (paragraph 23), wherein said optical unit (3) is a lenticular lens in which a plurality of cylindrical lenses (3a) is arranged such that a geometric axis of each cylindrical lens is substantially aligned with a space between the first pixel (420) and the second pixel (430) of at least one pixel section (figure 6), and the geometric axis of said cylindrical lens (3a) extends along said second direction (11, paragraph 24, figure 6).

AAPA does not disclose wherein said transmissive region and said reflective region are arranged in a second direction perpendicular to the first direction in each pixel, wherein said transmissive regions in said pixel sections are arranged in a line in the first direction, and said

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reflective regions in said pixel sections are arranged in a line in the first direction, and lines of said transmissive regions and lines of said reflective regions alternate repeatedly in the second direction.

Iljima discloses pixel section (615, figure 3) comprising transmissive region (525) and reflective region (521a) are arranged in a second direction (from up to down direction) perpendicular to the first direction in each pixel, the transmissive regions (525) in said pixel sections (615) are arranged in a line in the first direction (from left to right direction), and the reflective regions (521a) in said pixel sections (615) are arranged in a line in the first direction, and lines of said transmissive regions and lines of said reflective regions alternate repeatedly in the second direction (column 13, figure 3).

Thus, it would have been obvious to a person of ordinary skill at the time the invention was made to modify pixel sections of AAPA with the pixel sections of Iljima. The motivation for doing so would improve extremely excellent quality of the image being displayed on the screen of the LCD panel.

In regarding to claim 10, AAPA as modified discloses an image display device according to Claim 1, wherein said display panel is a liquid crystal display panel (22, paragraph 18).

In regarding to claim 12, AAPA as modified discloses an image display device according to Claim 11, wherein said image for said first viewpoint is an image for the left eye and said image for said second viewpoint is an image for the right eye which has a parallax with respect to said image for the right eye to thereby provide a three-dimensional image (paragraph 26).

Claim 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Iljima as applied to claim 1 above, and further in view of Son et al. (US 6,603,504).

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In regarding to Claim 11, AAPA as modified discloses an image display device according to claim 1, but does not disclose the first direction is horizontal direction of a display plane.

Son et al disclose “one direction of the incident beam must be parallel to the polarizing direction 48 of the polarizing plate of the image display element and the other direction of the incident beam must be a direction 49 vertical to the polarizing direction 48” (col. 6, lines 14-18; figure 7). Accordingly, the direction 49 corresponds to a horizontal direction as claimed, and display panel 25 corresponds to the display plane as claimed.

Thus, it would have been obvious to a person of ordinary skill at the time the invention was made to modify AAPA to have the first direction is horizontal direction 49 of a display plane 25 taught by Son because this would provide a multiview 3D image display device which decreases the size of system and has a high resolution of images, and which can thus improve the quality of images (col. 1, lines 59-62 of Son et al.).

Regarding to claim 13, Son et al. as modified disclose an image display device according to claim 1, wherein said first direction is a vertical direction (48) of a display plane (25, figure 7 of Son et al.).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Iijima as applied to claim 1 above, and further in view of Fujimori et al (US 2003/0117551).

Regarding to claim 17, AAPA as modified discloses the image display device of claim 1, but does not disclose an area of the transmissive region is equal to an area of the reflective region.

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Fujimori et al. disclose the optical path length of the light passing through the transmission region Tr is the same as that of the light passing through the reflection region Rf. This enables implementation of display with a high contrast ratio (paragraph 116).

Thus, it would have been obvious to a person of ordinary skill at the time the invention was made to modify AAPA to have transmission region Tr is the same as that of the light passing through the reflection region Rf because this would improve the high contrast ratio of the image being displayed.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN M. NGUYEN whose telephone number is (571)272-7697. The examiner can normally be reached on Monday-Thursday from 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on (571)272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M Nguyen/
Primary Examiner, Art Unit 2629

/KMN/
April 28, 2009